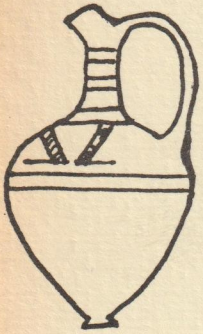
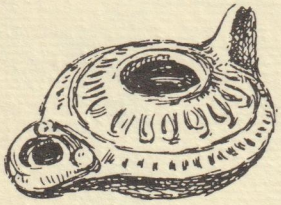
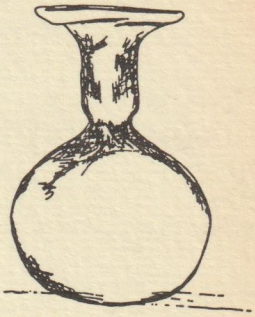
THE SARAZYN COLLECTION







Ancient Artifacts from the
Eastern Mediterranean

THE SARAZYN COLLECTION

Ancient Artifacts from the
Eastern Mediterranean

June 4 -
July 13, 1984

University Art Museum

An exhibition organized by a
Graduate Seminar on Topics in Ancient Studies

Andrew John Sarazyn 1915-1978

THE SARAZYN COLLECTION: ANCIENT ARTIFACTS FROM THE EASTERN MEDITERRANEAN

This collection of ancient coins, glass, lamps, and pottery forms the majority of a recent bequest to the University of Minnesota by the late Andrew J. Sarazyn of Marshall, Minnesota. Mr. Sarazyn served for many years with the United Nations in the Middle East. The bequest was made to the University in 1979 via the Classics (Classical Studies) Department with the stipulation that it was to be used for teaching purposes. The objects are now housed in the University Art Museum. Since 1980, four seminars, sponsored by the Classics Department and the Center for Ancient Studies, have been held around each of the four main components of the collection. In 1980, a seminar on the pottery was conducted under the guidance of William Coulson; this was followed in 1981 by a seminar on the coins given by Joan Fagerlie and Thomas Kraabel, in 1982 by a seminar on the glass given by Mary DeMaine and Thomas Kelly, and, more recently in 1983, by a seminar on the lamps by Vancia Schrunk and Sheila McNally. We also wish to thank Guy Gibbon, Director of the Center for Ancient Studies, for his help. In each class, the objects were identified, typed, dated, and catalogued; the research done in these seminars has formed the basis for some of the information presented in this catalogue. Some of the vases were also restored.

All work on the objects has culminated in this exhibition, the work for which has been accomplished in another special seminar. The student participants were, in alphabetical order, Judy Deuling, Peggy Mook, Ray Phillips, and Fotini Zervaki. The coordinator was William Coulson. William Schwabacher of the General College and Rosanne Gulino of the Classics Department also participated. We wish to thank Heidi Schwabacher for making the drawings of the lamps which appear in this catalogue. Special lectures were given by Lyndel King, Susan Brown, Abigail Terrones, and William Lampe of the University Art Museum. The money for this catalogue was contributed by the University Art Museum, the Classics (Classical Studies) Department, the Center for Ancient Studies, and the Graduate School at the University of Minnesota.

The University had already in its possession, as a result of its partial sponsorship of the excavations at Tel Mikhal in Israel, ten vases from the excavations of Tel Aviv University at Beer-Sheba. Since the objects from the Sarazyn bequest have been identified by means of parallels as originating in Palestine, several of the vases from Beer-Sheba are, for the sake of completeness, included in this

exhibition. The importance of the Sarazyn Collection is that it spans a broad period of time from the Early Bronze Age to the medieval era and presents an excellent survey of the various types of objects from each period in the eastern Mediterranean.

We wish to thank all connected with the collection and its exhibition for their help, especially Susan Brown who edited the text and Karen Lovaas and Valerie Tvrdik who designed and produced the catalogue.

William D.E. Coulson
Chairman
Department of Classics

Lyndel King
Director
University Art Museum

CATALOGUE NOTE

All dimensions are in centimeters; height precedes width precedes depth.

The letter-and-number combinations appearing with each of the items in the checklist represent identification numbers assigned by the students who researched the pieces in the four earlier seminars using these objects.

SARAZYN COLLECTION: POTTERY by Margaret S. Mook

Pottery is the most ubiquitous of archaeological finds. This is because of its great durability; although a pot may break, the fragments themselves do not disintegrate. Pottery has thus become the most important chronological indicator to excavators and is able to be dated by means of parallels found in contexts for which the date is fairly certain (for the pottery of the Bronze Age, for example, the presence of imported pottery in datable Pharaonic Egyptian tombs allows a chronology to be established for these wares imported from around the Mediterranean). Most pottery was well within the economic reach of all members of a society, and so it provides a means of judging the aesthetic and practical sensibilities of the manufacturers. So, too, an understanding of an area's internal communication routes and foreign contacts can be developed from the distribution of its pottery.

The selection of pottery, and one ceramic and two bronze figurines, in this exhibition spans a broad period of time from the beginning of the Bronze Age in the thirty-first century B.C. to the sixth century A.D. in the Byzantine period. It presents an excellent survey of the various vessel types from each period, and this catalogue adds to the meager amount of published material on Palestinian pottery. Included in this exhibition also are seven vases from the excavations of Tel Aviv University at Beer-Sheba, located southeast of Gaza, given to the University of Minnesota as a result of its partial sponsorship of the excavations of Tel Mikhal. The majority of the objects from the Sarazyn bequest have been identified as originating in Palestine through parallels in published sources, and so they, together with the Beer-Sheba vases, form a homogeneous body of material. Two of the Sarazyn pieces were imports into that area, one Cypriote and the other Greek (nos. 10 and 22), and reveal the kinds of foreign influences to which Palestinian potters were exposed. Examples in the exhibit of local imitations of non-Palestinian types also reveal the manifestation of foreign influences (no. 12).

By examining this pottery, it is possible to determine the methods of manufacture, decoration, shape, and material. Only two of the vases, both from the Early Bronze Age, were hand-built and not made on a potter's wheel, and one of these pieces was finished on a wheel. A variety of techniques were used to finish the surfaces of the vases, the most common being the application of a slip. A slip is a liquid composed of fine clay suspended in water which may or may not have been made from the same clay as the vessel itself. Slip was applied

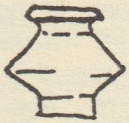
either by dipping the pot into the liquid or by brushing or pouring it over the vase before it was fired. Although there is no sharp distinction made between paint and slip, paint tended to be used to decorate smaller areas of surface and was applied with a brush or, as on no. 8 in this exhibition, was dripped on to the vessel. Bands of paint may have been applied with a compass, as on no. 11, or while the vessel was turned on the wheel.

Another common surface treatment, called wet-smoothing, involved the treatment of a vessel's surface with a wet hand or rag while the clay was still plastic. Vessels were also often finished with burnishing, which consisted of smoothing or polishing the surface of the piece, before firing, with a hard, smooth instrument. Wheel-burnished vases were finished while the vessel rested on the wheel, resulting in bands which are regular and parallel to the base. Incising was also a frequently used method of decoration. A typical type of incised decoration on early vases was combing--narrow, regular, incised strokes that were created several at a time by a toothed tool.

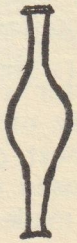
The pottery in this exhibition from the Bronze and Iron Ages (c. 3100-586 B.C.) consists mostly of cooking and eating vessels. However, the majority of the vases representing the Hellenistic, Roman, and Byzantine periods (c. third century B.C. to the sixth century A.D.) are smaller noncookware forms. The terms used to identify these small vessels most often refer to their shapes, and these are illustrated below.

piriform: pear-shaped

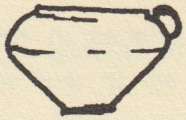
carinated: ridged; the walls of the vessel are broken into angles



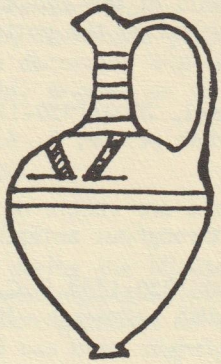
fusiform: tapering at each end, spindle-shaped



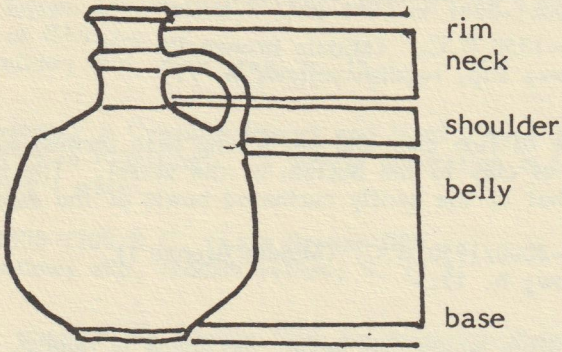
spheroid: a volume generated by revolving an ellipse around one of its axes



ovoid: egg-shaped



Vessel parts:



The objects in this exhibition have been arranged chronologically, and within each broad chronological division the vases have been arranged according to shape, beginning in each section with the open shapes and ending with the closed ones. In this way the variety and range of shapes within each period become evident.

BRONZE AGE, 3100-1200 B.C.

The earliest pieces in the Sarazyn Collection belong to the Bronze Age.

1. **Bowl,** 2350-2000/1950 B.C. (Early Bronze IV/Middle Bronze I)
   Clay, reddish yellow; slip, reddish yellow; h. 7.8
   P-1

   The remnants of the slip are on the interior. This piece was handmade, but it was finished on the potter's wheel. There is combed decoration on the outer rim.

2. **Shallow bowl,** 2000/1950-1730 B.C. (Middle Bronze IIA)
   Clay, reddish yellow; h. 6.2
   P-3

   Wheel marks are visible on the exterior of this bowl. This is a shape that persisted throughout antiquity.

3. **Bowl,** 2000/1950-1730 B.C. (Middle Bronze IIA)
   Clay, reddish yellow; h. 10.2
   P-4

   Wheel marks are also visible on this piece. Missing sections of the rim and upper body have been partially restored.

4. **Small goblet,** 1730-1550 B.C. (Middle Bronze IIB-C)
   Clay, reddish yellow; slip, reddish yellow; h. 7.5
   P-5

   This vessel is made of fine clay and has a ring base formed by the addition of a separate coil of clay to the bottom of the vessel. The shape of this goblet resembles that of the gently carinated bowls of the same period.

5. **Goblet,** 2250/2200-2000/1950 B.C. (Middle Bronze I)
   Clay, reddish yellow; h. 10.5
   P-7

   Although the clay from which this vessel was made is reddish yellow, the piece has fired red on one side. The base is flat.

6. **Incense burner,** 2250/2200-2000/1950 B.C. (Middle Bronze I)
   Clay, pale yellow; h. 3.5
   P-8

   This piece has been partially restored. The interior is burnt, and the shape is unusual and may represent a clay copy of an alabaster prototype. There is black paint on the body below the rim, black dots on the rim, and some paint on the handles. The holes in each handle were perhaps for tying a flat cover on to the burner.

7. **Teapot,** 2250/2200-2000/1950 B.C. (Middle Bronze I)
Clay, pale yellow; h. 8.6
P-9

Wheel marks are visible on this teapot, and the base is rounded. The spout, however, was handmade and then applied to the body of the vessel.

8. **Juglet,** 2900-2650 B.C. (Early Bronze IIB)
Clay, pink; h. 7.1
P-10

The brownish-yellow paint used to decorate this piece was typical of Early Bronze Age pottery. This vessel is the only entirely handmade piece in this selection of pottery. The body and handle are decorated with irregular vertical stripes of paint applied by hand, probably dripped on to the vessel.

9. **Piriform juglet,** 1730-1550 B.C. (Middle Bronze IIB)
Clay, light gray; slip, light brownish gray; h. 9.0
P-11

The shape of this juglet was a highly popular form during the Middle Bronze period. Its button base, a typical feature of piriform juglets of this era, probably evolved from the small flat bases which appeared on similar pieces of the previous age. The slip on this vessel has been slightly burnished.

10. **Cypriot juglet,** known as a "bilbil," 1550-1400 or 1400-1300 B.C.
(Late Bronze I or IIA)
Clay, reddish yellow; slip, dark gray; h. 14.1
P-14

This juglet is probably a Cypriote import and is of a type found in considerable quantities in Palestine. Its plastic decoration is typical of Cypriote Base-ring I ware.

11. **Pilgrim flask,** 1300-1200 B.C. (Late Bronze IIB)
Clay, reddish yellow; slip, reddish yellow; h. 13.5
P-15

It is not known whether the pilgrim flask originated in Palestine or if its appearance was the result of foreign influence. It originated, however, in the Late Bronze Age and quickly became one of the most popular and most characteristic ceramic shapes of this and subsequent periods. The pilgrim flask differed from other pottery vessels not only in its shape but in the technique of manufacture imposed by this shape. The flask could not be thrown on the wheel in one operation and had, therefore, to be made in several stages: first, two plates were thrown on the wheel and joined together; the neck, also wheel-made, was then joined to the body; finally, the handles were attached. The belly of the pilgrim flask in this exhibition is decorated with dark brown concentric circles.

12. **Pyxis (box),** 1300-1200 B.C. (Late Bronze IIB)
Clay, red; h. 7.7
P-16

The surface of this wheel-made vessel was wet-smoothed, and there is a patchwork of brown clay on the rim and neck. Two vertical handles are joined to the top of the shoulder and contain holes for hanging. The neck, shoulder, and handles were originally painted black. The decoration consists of three band-combed rings at mid-belly and a large dark brown band flanked by two small black stripes.

This piece is a local imitation of a Mycenaean (late Greek Bronze Age) type of vessel. All the imported Mycenaean vessels used as prototypes by Palestinian potters were wheel-made; however, the technical level of workmanship attained by the Mycenaeans was not reached by the Palestinian potters. These local artisans found the pyxis an especially attractive form and copied it so frequently that it almost became one of the native ceramic types. The pyxis was the favorite Mycenaean form used as a model by Palestinian craftsmen, just as the bilbil (no. 10) was the preferred Cypriote import.

IRON AGE, 1200-586 B.C.

In the Iron Age there was great progress made in wheel-working and firing techniques, and the number and variety of types of vessels increased substantially. The high technical and aesthetic achievement of the potters is evidenced in vessels such as the water decanter (no. 19) which is particularly characteristic of the Iron IIC Period (800-586 B.C.).

13. **Bowl,** 800-586 B.C. (Iron IIC)
Clay, light red; h. 8.3
P-17

This piece comes from Beer-Sheba. It has been restored, and its surface was originally wheel-burnished. The large chip on the rim of this vessel reveals its pinkish gray core, which is indicative of a flaw in the firing that is present in most Iron Age pottery of Palestine. A dark core is most common in large vessels with thick walls and was caused either by insufficient oxygen during firing, by firing at temperatures that were too low, or by firing the vessel for too short a period of time.

14. **Bowl,** 800-586 B.C. (Iron IIC)
Clay, reddish yellow; slip, red; h. 6.3
P-18

The slip on this piece has been brushed around the interior, along the rim, and some has splashed on the side of the bowl.

15. **Bowl,** 800-586 B.C. (Iron IIC)
Clay, pale brown; slip, pale brown; h. 5.3
P-19

There are dark and light splotches of slip on the surface of this bowl. It has a ring base and is a good example of this type of base.

16. **Holemouth jar,** 800-586 B.C. (Iron IIC)
Clay, light brown; h. 27.0
P-24

This pot comes from Beer-Sheba, and its form, which began to appear in the previous era, became common in the Iron IIC period. Wheel marks are visible, and the surface has been wet-smoothed. The piece has been restored.

17. **Cooking pot,** 800-586 B.C. (Iron IIC)
Clay, light reddish brown; h. 16.6
P-25

The surface of this pot was wet-smoothed, and there are burnt areas around the base. There are raised bands on the neck and two horizontal incisions at the bases of the handles. This vessel is also from Beer-Sheba.

18. **Large cooking pot,** 800-586 B.C. (Iron IIC)
Clay, red; h. 20.3
P-26

This vessel from Beer-Sheba demonstrates the trend in Iron IIC cooking pots towards the development of a distinct neck. The body is carinated, and there are incised lines on both the body and rim. An "x"-shaped potter's mark is visible on the handle, and on the side of this same handle there are two parallel incised lines. Wheel marks are visible, and the pot is burnt on the lower belly. The piece has been restored.

19. **Decanter,** 800-586 B.C. (Iron IIC)
Clay, varies from light reddish brown to pinkish gray; h. 19.4
P-27

Another vessel from Beer-Sheba, this is one of the most characteristic Iron IIC forms. The belly is decorated with horizontal bands made with a dull instrument. Both this piece and no. 20 exhibit features common to all decanters of this period: the shape of the body and the ridged neck with handles springing from the ridge.

20. **Decanter,** seventh century B.C.
Clay, light red; h. 19.0
P-28

21. **Decanter,** seventh century B.C.
Clay, reddish yellow; slip, light red; h. 16.8
P-29

This is a slender variation of the decanter type.

22. **Oinochoe,** ninth century B.C.
Clay, light brown; slip, medium brown; h. 15.6
P-00

This piece was imported from Greece into Palestine. It dates from the Early Geometric Period in Greece which corresponds to the Iron IIA period in Palestine. There are traces of painted reddish brown, crosshatched triangles on the shoulder, a typical motif on Greek vessels of this period. Reddish brown horizontal bands have been painted on the belly and neck. The rim is trefoil-shaped.

23. **Piriform juglet,** 800-586 B.C. (Iron IIC)
Clay, light gray; h. 12.1
P-32

This was a common dipper-juglet form in the Iron IIC period. The piece comes from Beer-Sheba. The clay is fine, and the surface has been wet-smoothed. The neck is tapered with an everted pouring lip and a rounded base. There are traces of wheel-made finger-combing on the belly.

24. **Juglet,** 1000-900 B.C. (Iron IIA)
Clay, dark gray; slip, black; h. 10.1
P-33

The slip is faded and worn at the base.

25. **Black dipper juglet,** 800-586 B.C. (Iron IIC)
Clay, dark gray; slip, dark gray; h. 6.1
P-34

This black juglet is of a type that evolved in the preceding Iron IIA-B period. The entire surface has been burnished. The small carinated bulbous body tapers to a small semiflat base and has a slightly everted lip with a short neck.

26. **Small bottle,** seventh century B.C. (Iron IIB)
Clay, gray-black; slip, gray-black; h. 13.4
P-36

This vessel may be an Assyrian import into Palestine. Its surface is covered with horizontal bands of white paint, probably applied while the piece rested on the potter's wheel.

27. **Small jar,** seventh century B.C. (Iron IIB)
Clay, very dark gray; slip, very dark gray; h. 7.5
P-37

This vessel has been wheel burnished black and is painted with bands of white paint. It has a round base and body and is similar to no. 26 in decoration but is more globular in shape. The rim is offset.

28. **Incense burner (fragment),** 1200-586 B.C. (Iron I-II)
Terra cotta; slip, yellowish red; h. (preserved) 11.9, Lion: h. 9.8
F-3

This female figurine attached to a pillar standing on a lion is probably from a house-shaped incense burner of which this would have been one of the corner supports.

HELLENISTIC, third century B.C.-early first century A.D.

The Sarazyn Collection does not include any pieces from the sixth century B.C. to the fourth century B.C. but does have examples from the Hellenistic era which lasted from the third century B.C. to the early first century A.D. In this period Palestinian potters mastered a variety of complex shapes.

29. **Bowl with vertical sides,** late first century B.C.-early first century A.D.
Clay, reddish yellow; h. 4.9
P-38

This piece has been restored. The surface was wet-smoothed, and there are string marks at the base, made when the potter separated the pot from the wheel with a string.

30. **Bowl with incurved rim,** late first century B.C.-early first century A.D.
Clay, pale yellow; h. 3.1
P-39

The surface of this bowl was wet-smoothed, and the base was string-cut.

31. **Carinated cup,** second to first century B.C.
Clay, pink; slip, reddish yellow; h. 5.4
P-40

This vessel is of a fine clay and has worn surfaces, a broad spheroid body, an upturned rim, and a flat base. The shape of this piece is unusual and is perhaps a variation of Attic (from the region of Athens) spheroid cups or is derived from the Hellenistic household vessels which have the same incurved sides and carinated bodies. There are no known direct parallels.

32. **Fusiform unguentarium,** mid-second century B.C.
Clay, light brownish gray; slip, light brownish gray; h. 17.5
P-41

This unguentarium presumably contained ointments or perfumes (i.e., unguents). The clay is fine, and there are gray-black bands on the shoulder and belly. The surface was wet-smoothed, and the rim is offset. It is significant that the color of the slip and the texture of the surface combine to produce a metallic appearance, a deliberate attempt to finish a ceramic vessel to imitate a more costly metal vase.

33. **Fusiform unguentarium,** late first century B.C.
Clay, light gray; slip, light gray; h. 17.5
P-42

The clay used in this piece is fine, and the surface was wet-smoothed. There are brush-combed bands on the neck and belly.

34. **Amphoriskos,** second to first century B.C.
Clay, reddish yellow; h. 17.2
P-44

An amphoriskos is a smaller version of the Classical Greek amphora, any of a variety of types of two-handled jars with narrow necks used to hold liquids. This vessel may be a Palestinian variation on two of those forms. It has a fusiform-shaped body and combines the unguentarium shape with the neck handles of a small amphora. No direct parallels exist. This is a large example of no. 35 and perhaps was intended to hold double the capacity of the more standard sized no. 35.

35. **Amphoriskos,** late second century B.C.
Clay, reddish yellow; h. 18.2
P-45

This vessel has a fusiform body with a flat base and neck handles; there is no surface decoration.

36. **Bottle,** first century B.C.-early first century A.D.
Clay, pinkish gray; slip, pinkish gray; h. 13.9
P-47

This is a sagging pear-shaped vessel with a short narrow neck and a flat base. There are black and orange-brown bands of paint on the neck and shoulder.

37. **Bell,** first century B.C.-first century A.D. (late Hellenistic-Roman)
Bronze; h. 3.7
F-4

This piece is heavily corroded. Its conical shape is intact, but the clapper is missing. The loop handle was for suspension.

38. **Head,** c. first century A.D. (late Hellenistic)
Bronze; h. (preserved) 3.1
F-5

Although this piece is corroded and broken at the neck, the facial features are still distinguishable. The chin is slightly pointed, the eyes are not well-defined, the nose is prominent, the cheeks are full and rounded, and the hair is parted to the side.

ROMAN, late first century B.C.-fourth century A.D.

The selection of pottery in this exhibition from the Roman period consists of vases, produced in Palestine, which are characterized by ribbed decoration on the bodies.

39. **Piriform unguentarium,** first century A.D.
Clay, pale brown; slip, pale brown; h. 11.5
P-53

This vessel may represent a Palestinian imitation of the piriform type; no direct parallels are known. The slip was perhaps originally red, but it is now quite worn.

40. **Piriform unguentarium,** late first century B.C. or first century A.D.
Clay, light olive gray; h. 7.4
P-54

The shape of this vase is unusual and perhaps was derived from the piriform unguentarium type. The neck tapers to a short angular body, and there are incised grooves at mid-belly.

41. **Ribbed unguentarium or balsamarium,** first century A.D.
Clay, reddish yellow; h. 9.4
P-55

The term balsamarium is used to describe any of a variety of small vessels used to hold the fragrant gum of the balsam tree. The shape of this vessel with its short, bulbous body, flat base, and tapered and flared upper neck is unusual and has no known ceramic parallels. The rippled contour, however, suggests that it may have originated in blown glass since it is similar in shape to the corrugated glass balsamarium. This is perhaps a Palestinian ceramic imitation of a glass balsamarium. There are deep wheel-turned finger grooves on the long neck.

42. **Ribbed unguentarium or balsamarium,** first century A.D.
Clay, reddish yellow; h. 9.6
P-56

Very similar to no. 41, this vessel has a tapered and beveled upper neck and rim, deep wheel-turned finger grooves over the entire vessel, and a flat base.

43. **Small bulbous unguentarium?,** late first century B.C.-first century A.D.?
Clay, pale brown; h. 8.3
P-57

The shape of this vase is unusual; the rim is sharply offset, the neck is wide, and the base is flared and flat. It may be derived from the bulbous unguentarium type, but the base is more flared and the neck is wide and lacks a colored wash. This may possibly be a Palestinian variation of the bulbous unguentarium.

44. **Small conical jar or stopper,** first to second century A.D.
Clay, pink; slip, pink; h. 5.9
P-58

The rim of this piece is everted, the body is bulbous and carinated, and the base is flat. Such vessels were used either as stoppers for table amphorae or as small jars, perhaps for unguents.

45. **Juglet,** first century A.D.
Clay, reddish brown; slip, pale brown; h. (preserved) 10.5
P-61

The rim and handles of this piece are missing but reconstructed it would have this shape:

This vessel has a sagging body with a tubular neck and wheel ribbing on the belly.

46. **Juglet,** third to fourth century A.D.
Clay, pink; slip, reddish brown; h. 9.9
P-62

This type of juglet was very common in the late Roman period in Palestine. The body is ovoid with a splayed rim, the handle is ribbed, and there is spiral ridging on the lower neck and belly.

47. **Juglet,** third to fourth century A.D.
Clay, pink; slip, strong brown; h. 9.5
P-65

This vessel is similar to no. 46 but has spiral ridging on the belly only.

48. **Juglet,** third to fourth century A.D.
Clay, yellow; slip, gray; h. 8.4
P-66

This juglet is similar to no. 46 but is smaller and has broad spiral ridging on the lower belly only. The piece has been restored.

49. **Juglet,** third century A.D.
Clay, pink; slip, yellowish brown; h. 5.9
P-67

This piece has a wide neck and a short carinated body.

50. **Ribbed juglet,** third to fourth century A.D.
Clay, light reddish brown; h. 6.4
P-68

The shape of this vessel is unusual and without ceramic parallels. It may have been derived from glass prototypes, or it may have been a Palestinian imitation of the small ribbed ceramic jars popular in late Roman times. The surface of this vase was wet-smoothed. It has a tapered neck and deep wheel-turned finger grooves on the body. The small handle is attached to the lower neck and upper belly.

51. **Small flask,** third century A.D.
Clay, reddish yellow; slip, reddish yellow; h. 7.9
P-70

This piece has been restored; one handle and a portion of the rim are missing. The vessel has a very short neck, round body, and small flat base.

BYZANTINE, fifth to eighth centuries A.D.

52. **Juglet,** sixth century A.D.
Clay, reddish yellow; h. 7.0
P-71

This is the only piece of Byzantine pottery in the Sarazyn Collection. It is decorated on the shoulder with diagonal grooves in groups of two and three and has a flat string-cut base.

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LAMPS OF THE SARAZYN COLLECTION by Judy Deuling

Since earliest times lamps have been used as an artificial method of lighting the dark periods of men's lives. Early lamps were an open shell or bowl filled with different oils or animal fats which were soaked up a wick of vegetable or other combustible fibers. Lamps have been constructed of different materials including stone and iron or bronze, but the majority have been made of terra cotta which is inexpensive and easy to use. Even the poorest could afford a few lamps in their houses.

The first lamps were open bowls which were difficult to carry around since nothing kept the oil from spilling out. The wick floated on top or rested in the bottom of the bowl. Niches in walls or hollows were made to hold the rounded bottoms. Gradually bases were added and then pinched areas on the side of the bowl which could hold the wick out of the oil. One or more wicks were used depending on how much light was desired from a single lamp. Further developments included lengthening the body into a shelf to support the wick. A horizontal handle was added opposite the wick hole, and the top of the bowl was curved in to help keep the oil from spilling. The pinched rim was bridged to produce a nozzle. Apparently this development was so helpful that the nozzle grew larger and was added separately to the body of the bowl. Eventually the filling hole decreased in diameter leaving a greater area at the top which the lamp makers often left concave forming a ready-made funnel for filling the lamp. Handle style changed from horizontal to vertical and on some types disappeared completely. Later styles had a small knob which was completely useless for holding the piece. Meanwhile the reservoir was deepened to hold more oil. The body and nozzle developed into vehicles for popular decorations, sayings, and religious symbols.

Manufacture of lamps varied also. The very first lamps were handmade. With the advent of the potter's wheel, the form changed from an open bowl to a closed bowl which was usually undecorated since a decorated lamp would require specialized attention, taking more time to produce. Not until mold-made lamps became popular did decoration on the pieces become common. At first these mold-made lamps were rather plain and followed the shapes of the wheel-turned examples. Gradually, however, the lamp took on a distinctive elongated shape in which the nozzle was a part of the overall design of the piece, not just an addition. Decoration was relatively easy to implement on mold-made lamps since a lamp had to be designed and decorated only once. After a mold had been made of the master lamp, hundreds of

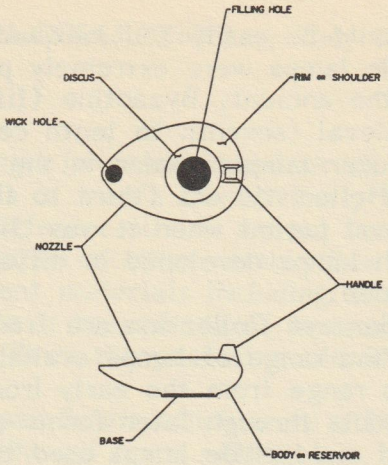
copies of that lamp could be easily and inexpensively produced.

Although mold-made lamps were extremely popular, wheel-made lamps continued throughout the ancient, Byzantine (fifth to eighth centuries A.D.), and even medieval (seventh to tenth centuries A.D.) periods. In fact, the folded saucer lamp common in the Iron period remained in use even through the Hellenistic era (third to first centuries B.C.) and on into the medieval period when it was characterized by a green glaze. Thus, although lamps developed in different ways, some styles remained universally used.

The lamps of the Sarazyn Collection are from the Syro-Palestine area, and they cover the range of lamps available at different periods in that region. Types range from the early Iron Age wheel-turned saucers with folded spouts through later forms of wheel-made lamps as well as the variformed mold-made lamps used throughout the Roman and Byzantine periods. In fact, lamps of this region reflect the same types used throughout the whole Mediterranean world since lamps were imported from other areas into the region.

The Sarazyn lamps were purchased from dealers in the Syro-Palestine area and are not examples taken from known, dated, archaeological contexts. As a result, we cannot tell whether the lamps came from homes, businesses, tombs, or any other locations. All we can know for certain is that some of these lamps were used since their nozzles are blackened from the flame which once burned there, probably to produce light. Nevertheless, this group of lamps can be studied in relation to other groups of lamps from other sites in the Syro-Palestinian region as well as in relation to the lamps of the ancient periods in general. We can locate the lamps in the Sarazyn Collection in both time and place by comparison with these other groups. Although not all the lamps in the collection are included in this exhibition, these lamps are a useful representation of lamps throughout the ages in this region.

The lamps of the Sarazyn Collection are roughly 2.5 cm. high, 6.0 cm. wide, and 9.0 cm. long. Colors were determined by using the Munsell Soil Color Charts and the National Bureau of Standards Centroid Color Charts. The numbers and letters of the Munsell Charts are used in archaeological excavations as a standard means of describing colors of soil and artifacts, while the NBS Charts translate the Munsell Soil Colors into a standard, easily understood terminology. The majority of the lamps were found intact and are described thus. See the figure below for the principal parts of a lamp.



WHEEL-TURNED LAMPS

53. **Lamp,** 800-580 B.C. (Iron IIC)
Intact; clay 5YR 5/6 brownish orange
H. 3.9, W. 13.4
L2

Although one side of the shallow, wheel-turned bowl has been folded over to hold the wick, the bowl is open and the oil could easily spill. However, the base has been flattened to support the lamp on a level surface. The pinched spout is blackened from burning.

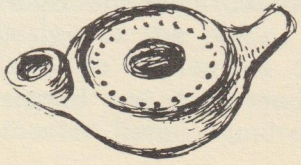
54. **Lamp,** 800-580 B.C. (Iron IIC)
Intact; clay 5YR 7/6 moderate orange
H. 5.3, W. 13.0, D. base 5.9
L3

The bowl on this lamp has been deepened considerably compared to the previous piece. An added feature is the high disc base, an improvement over the rounded or even flattened bowl.

55. **Lamp,** third century B.C.
Intact; clay 7.5YR 7/6 light yellowish brown
H. 3.1, W. 4.5, L. 6.8
SB14

By the third century B.C. the lamp had evolved from an open bowl to a reservoir with an inturned rim. The body was turned on a potter's wheel and usually given a base. The nozzle was made separately and added to the body of the lamp before being pierced through. Many of these watch-shaped pieces were glazed, but this example is not. The style was common in both Greece and Egypt.

56. **Lamp,** third to second century B.C.
Intact; clay 7.5YR 7/6 light yellowish brown
H. 3.0, W. 6.0, L. 10.3
SC3



Another innovation about this time was the addition of a handle with which to carry the lamp about. The reservoir continued to be wheel-made, and the handle was added afterwards. Handles began as horizontal loops and developed into vertical loops or flat attachments like this one. Although the shape of the piece is common in both Greece and the Near Eastern areas at this period, the twenty-six equispaced holes in the discus are unusual. Their location suggests that they are decorative, but they could serve as air holes to produce a more efficient flame.

MOLD-MADE LAMPS AND PALESTINIAN ALTERNATES

While wheel-made lamps continued to be used on a small scale throughout the ancient period, by the second century B.C. a new type of lamp became popular. These mold-made pieces at first resembled wheel-made lamps but gradually developed their own shapes. Although wheel-turned lamps were made quickly, they required a skilled potter. On the other hand, mold-made lamps could be turned out on a large scale by unskilled labor. The Romans took advantage of the technique, exporting both inexpensive lamps and lamp molds throughout the empire.

57. **Lamp,** second to first century B.C.
Intact; clay 5YR 8/4 light yellowish pink
H. 2.5, W. 5.2, L. 8.4
SB17

This early mold-made lamp has some of the basic wheel-turned shape. This particular example is similar to a type found at Antioch with rayed decoration on the rim and a side knob or lug. This lug appears to be purely decorative at this point although it apparently evolved from a pierced lug which may have been used to hold a wick-trimming pin.

58. **Lamp,** first century B.C.
Intact; clay 10R 6/1 reddish gray
H. 3.0, W. 4.8, L. 8.5
SB10

This elongated body and nozzle are somewhat a development from the previous example. The side lug has been lost, and the nozzle has broadened into an extension of the reservoir.

59. **Lamp,** first century A.D.
Intact; clay 10YR 8/4 light yellowish pink, slip 10YR 3/2 moderate reddish brown
H. 2.0, W. 6.3, L. 9.0
SA4

By the first century A.D., this Roman "picture lamp" style was quite popular. Called a picture lamp because of the molded image on the discus, it had no handle, but the nozzle was molded on to the circular body. All decoration was molded in at the same time. The discus, rim, and nozzle were often decorated to one degree or another. Although the filling hole decreased in diameter, the difficulty of pouring oil was offset by the concave discus acting as a funnel. In this example the filling hole has been set offcenter, outside the figure molded on the discus. These picture lamps were probably imported into the region from Italy.

60. **Lamp,** first century A.D.
Intact; clay 10YR 8/3 pale orange yellow, slip 5YR 5/4 light brown
H. 2.0, W. 6.2, L. 9.0
SA5

On this picture lamp a wolf or dog stands above the filling hole. Volutes have been molded into the design joining the nozzle to the reservoir.

61. **Lamp,** first century A.D.
Intact; clay 7.5YR 7/4 moderate yellowish pink, slip 2.5YR 5/8 brownish orange
H. 2.0, W. 6.0, L. 9.1
SA7

The rooster on this discus fills the area making it useless as a funnel for pouring oil.

While the mold-made lamps were imported into the Syro-Palestine area from factories in Italy, a simple alternative, the "Herodian lamp," became available for a time in Palestine from around 37 B.C. to 135 A.D. As a rule it is easy to tell the lamp style from the Roman imports and local copies. Its clay is light in color, and any slip present is the same color as the fabric of the body of the lamp itself. The reservoir is wheel-made; it has no discus like the molded lamps. Rather, the rim bends in around a centrally located filling hole which may or may not be rimmed and flanged. In keeping with the simple style, the base is usually a slightly flattened area of the body. The nozzle--hand-fashioned, short and spatulated (bow-shaped)--was attached by hand, and the wick hole was then pierced. Usually the lamp is completely plain, but one subtype shows the nozzle decorated

with concentric circles and incised lines. Most examples, moreover, do not have handles, but a few do have vertical rings in that location. The style evolved from one type to another, changing its shape and size only slightly over the years, broadening the nozzle, increasing the size of the wick hole, and in some instances adding simple nozzle decorations. This wheel-made alternative to mold-made lamps became so popular in this area that it encouraged its own imitations, which were themselves mold-made.

62. **Lamp,** 37 B.C. to 50 A.D.
Intact; clay 5YR 6/6 light brown
H. 3.6, W. 6.3, L. 8.5
SC27

This is one of the earlier Herodian lamps, simple and undecorated. It has the large fill hole circled by a prominent ridge and wide inner flange common on this type. The base on this example, however, is not flattened but convex. The lamp probably sat in a divot since it cannot stand upright by itself.

63. **Lamp,** 35 - 135 A.D.
Intact; clay 2.5YR 6/8 moderate orange
H. 2.0, W. 7.0, L. 9.5
SC23

A later Herodian type, this example shows the wide wick hole and fill hole minus the wide inner flange common on the earlier pieces. The base of this lamp is flattened.

64. **Lamp,** 35 - 50 A.D.
Mended; clay 10YR 5/1 light brownish gray
H. 2.5, W. 7.0, L. 9.8
SC26

The handle and nozzle of this lamp have been repaired from recent breaks. This example is from the transitional period between the earlier and later Herodian lamps. Its fabric is gray rather than the light-colored red, and it has a vertical ring handle and the simple nozzle decoration found on some of the pieces of this type.

65. **Lamp,** first century A.D.
Intact; clay 2.5YR 6/6 grayish reddish orange
H. 2.8, W. 6.8, L. 8.5
SC20

This piece has the basic Herodian shape but falls into the category of mold-made imitations.

After Herodian lamps were no longer manufactured, mold-made forms, both imported and locally manufactured pieces, were used universally. At first the majority of lamps were imported from factory centers in Italy, but eventually the molds themselves were shipped to different locales. Lamps could be manufactured in provinces like Syria and Palestine where the right materials and a market existed. In turn, these inspired local copies. Decoration evolved from the Italian forms, taking on local characteristics. Religious symbols formed another trend in lamp decoration both in this area and throughout the empire. By the fourth and fifth centuries, crosses and other Christian symbols were common. In regions where Jewish communities were found, lamps might carry seven-branched candlesticks and stylized palm branches. A problem with religious symbols, however, is that many of the symbols were used by more than one religious group. As a result, lamps cannot always be relegated to a single period or even designated as belonging to a specific group.

Shapes of the mold-made lamps evolved from the circular-bodied examples common in the first century A.D. into an elongated slipper or pear shape which incorporated the nozzle as an extension of the reservoir of the lamp. In many cases, the broad, concave discus disappeared and was replaced by a large fill hole. Taking on local significance, decoration was focused on the rim of the piece where it was enhanced by light from lamps sitting nearby. Often a channel between the fill hole and the wick hole would catch any oil spilled while filling and return it to the reservoir. Handles, which had disappeared for awhile after the advent of mold-made lamps, returned but were more decorative than functional. Often a pinched or horn handle was added to the lamp after molding, although this type of handle could also be molded into the rim. Another type of handle was a flat piece molded as part of both the top and bottom halves of the body. None of these handles seems very useful for actually carrying the lamp, and many examples exist without a handle. Some pieces from the Syro-Palestine area do not follow this development but exhibit a Mesopotamian or Parthian influence. These look like boots or jugs with spouts rather low on the body. Apparently the style started in the third century A.D. and remained in the region even into the Byzantine and medieval periods (fifth to tenth centuries A.D.).

66. **Lamp,** second century A.D.
Intact; clay 10YR 8/3 yellowish gray
H. 2.4, W. 7.1, L. 7.6
SA12

Although this lamp shows shape and decoration common in other parts of the empire, it is probably a local production. The decoration is not well developed, as if it were made from a mold produced from an imported lamp on which the decoration was not crisply defined.

67. **Lamp,** second to third century A.D.
Intact; clay 2.5YR 3/6 strong brown, slip N2.5 dark grayish reddish brown
H. 3.3, W. 6.2, L. 10.1
SE10

This heavy, dark lamp with a vertical loop handle added on to a boat-shaped body is a Roman Egyptian style which may have been an Egyptian import.

68. **Lamp,** third to fourth century A.D.
Intact; clay 2.5YR 5/6 grayish reddish orange
H. 4.8, W. 6.5, L. 8.5
SC6

A shape variously called beehive, boot, or jug-shaped, this piece exhibits a Mesopotamian influence. This example does not sit evenly. The nozzle was probably handmade and added to a wheel-turned body.

69. **Lamp,** fourth to fifth century A.D.
Intact; clay 7.5YR 8/4 pale orange yellow
H. 2.7, W. 5.6, L. 7.5
SB4

The herringbone motif on the rim around the large filling hole of this lamp was a popular decoration in this period.

70. **Lamp,** fourth to fifth century A.D.
Intact; clay 7.5YR 7/4 light yellowish brown
H. 3.0, W. 7.0, L. 9.0
SB7

This example shows a step in the transition from the circular Roman lamps to the Byzantine slipper style, incorporating the nozzle into the reservoir and taking on the ovoid shape of the pear or slipper style.

71. **Lamp,** fifth century A.D.
Intact; clay 5YR 8/4 light yellowish pink
H. 3.7, W. 6.7, L. 8.6
SD4

This ovoid lamp demonstrates the general form which molded lamps took. Although the concave discus is present here, it is completely undecorated. The guilloche and rosette pattern occupies the rim while a Greek cross fills the nozzle. One arm of the cross is replaced by the wick hole at the

tip. The pyramidal handle, which was probably molded into the rim, merely seems to balance the wick hole opposite, across the discus. By this period the cross would indicate Christian symbolism.

72. **Lamp,** fifth century A.D.
Intact; clay 5YR 7/4 moderate yellowish pink, slip 2.5YR 4/8 strong brown
H. 2.6, W. 6.3, L. 10.1
SE2

The flat handle rising from the end of the lamp was probably molded in two parts--the top half was part of the mold for the rim and top of the lamp, while the bottom half was part of the mold for the bottom of the piece.

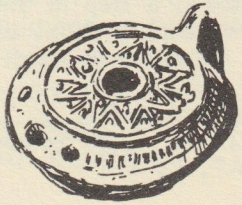
73. **Lamp,** fifth century A.D.
Intact; clay 5YR 6/4 light brown, slip 7.5YR 7/4 light yellowish brown
H. 2.5, W. 6.2, L. 8.7
SE8

This pear-shaped lamp with an angular profile shows worn decorations and features, like the handle. The worn look may actually be due to poor mold work since the piece seems to be a local copy of "African" types which had been imported into the area.

74. **Lamp,** fifth to sixth century A.D.
Broken handle tip; clay 2.5YR 6/4 light reddish brown, slip 10YR 7/3 light grayish yellowish brown
SC12

The bottom of this lamp shows crosses in the base as well as on the underside of the reservoir. Perhaps it was meant to be raised or hung so that the decoration of the underside was visible when other lamps were lit around it.

75. **Lamp,** late fifth to sixth century A.D.
Intact; clay 2.5Y 8/10 light orange
H. 3.0, W. 9.5, L. 10.0
SC16



The decoration on this circular lamp may have Christian connotations but was actually quite common in the region. The three wick holes were used to hold three wicks. A fourth hole was started at some point, but the piercing was never completed. It may have been decided that a fourth wick hole would affect the symmetry of the piece.

76. **Lamp,** sixth to seventh century A.D.
Intact; clay 7.5YR 7/6 moderate orange
H. 2.2, W. 8.4, L. 9.0
SC17

Flat, pancake lamps of this type have been found at Antioch and other sites in the Syro-Palestine area. The decoration was formed originally by incising the matrix from which the mold was made. On production pieces themselves, the decoration may have been accentuated by further incising. For example, the decoration on the top of this lamp is much clearer than that on the bottom where a design would not have been as likely to be seen. The fingerprints visible on the top were formed while the clay was still wet but not smoothed away when the lamp dried.

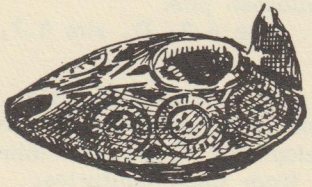
77. **Lamp,** sixth to seventh century A.D.
Intact, chipped at wick hole; clay 10YR 8/2 pale yellowish pink, slip 7.5YR 8/4 pale orange yellow
H. 4.0, W. 5.8, L. 8.1
SE4

This pointed slipper shape was common to the Syro-Palestine region in the sixth and seventh centuries. The herringbone decoration, rimmed filling hole, and another rim encircling the tiny discus, channel, and wick hole help distinguish this style.

78. **Lamp,** seventh to eighth century A.D.
Intact; clay 2.5YR 5/6 grayish reddish orange
H. 3.4, W. 7.3, L. 9.4
SD10

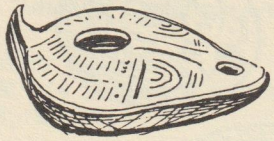
This ovoid piece shows a tree-like decoration on the rim which may have been a stylized menorah, or seven-branched candlestick, used in Jewish religious service.

79. **Lamp,** seventh to eighth century A.D.
Intact; terra cotta 7.5YR 4/0 dark gray
H. 3.7, W. 7.8, L. 10.2
SE12



Although this example looks as if it were formed from stone, it is actually gray terra cotta. The shape is common, but the medallion decoration is unusual in this group of lamps.

80. **Lamp,** seventh to ninth century A.D.
Intact; clay 2.5YR 6/4 light reddish brown
H. 3.6, W. 5.6, L. 9.0
SD9



This lamp probably came from a Jewish community since it shows two menorahs symmetrically located around the wick hole. As can be seen from the lamps in the collection, religious symbols were definitely a form of decoration on many lamps in this period.

81. **Lamp,** eighth century A.D.
Intact; clay 5YR 5/3 light grayish reddish brown
H. 3.5, W. 8.0, L. 9.5
SC5

By the eighth century A.D. wheel-turned lamps, which had continued to exist alongside mold-made lamps, again increased in number. These circular reservoirs with their sharply angular profiles demonstrated a Byzantine and even medieval shape.

82. **Lamp,** seventh to tenth century A.D.
Intact; clay 2.5YR 5/6 grayish reddish orange
H. 3.3, W. 5.7, L. 9.0
SC10

The shape of this piece with its wheel-made reservoir and neck are somewhat reminiscent of no. 68. It uses the Mesopotamian boot shape adding a sharply turned neck and flanged fill hole. This is probably an unglazed example of early medieval style.

83. **Lamp,** Byzantine, fifth to eighth century A.D.
Intact, chipped at rim; clay, 5YR 7/3 moderate yellowish pink, core 5YR 7/4 moderate yellowish pink
H. 10.1, D. base 6.2, D. rim 4.7, L. spout 4.5
L7

The sagging body and overall juglet shape of this example is common in the Byzantine and early medieval periods (fifth to tenth century A.D.) showing further development of Mesopotamian influence. The green glaze covered many lamps from these centuries.

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COINS OF THE MEDITERRANEAN by Fotini A. Zervaki

Like all of the objects in the Sarazyn collection, the coins have as their only common characteristic that they were bought in the same geographical area-and presumably were found in that area. Unlike the other objects in the collection, however, the coins were intended to circulate; consequently, the exact location where they were found and the objects found with them are not so important for the study of the coins. The coins themselves, however, may be of significant assistance in the dating of other findings from the same location. Coinage, as a part of archaeological or historical evidence, has several other great advantages, the most important being that coins were official and thus are likely to provide better and more authoritative information than evidence from private sources usually can. This does not mean that evidence provided by coins is necessarily true. The purpose of their inscriptions and types was sometimes one of propaganda.

"Coins" and "money" are not synonymous. The account of the origins of "money" goes back to Aristotle's **Politics.** Money in Aristotle's opinion originated through the requirements of exchange. To facilitate exchange, men agreed on some commodity in general use, as for example iron or silver, and treated it as a standard. Later still, to avoid the trouble of having to weigh them on every occasion, metal pieces of uniform weight were made and marked in some fashion so as to be easily recognized. "Money" was in this way embodied in "coin."

The making of coins involves three processes: authorization, manufacture, and issue, which are respectively legal, technical, and economic in character. The government or other issuing authority prescribes to the mint the weight of the coins, determines their design and assigns them a name and legal value, and determines the amount of coin to be issued. The conversion of bullion into coins by imposing a mark on it can be effected by either casting or striking. Casting was used for the earliest bronze coins of the Roman Republic and many Celtic coins, but the Western tradition has in general been that of striking.

GREEK, sixth century - 323 B.C.

The earliest coins were struck in Western Asia Minor and were small globular pieces of electrum impressed with a design on only one face.

Electrum is a natural alloy of gold and silver found in the Pactolus and other rivers of that region and was first thought to be a separate metal. In due course, such coin was supplemented by coins of pure gold and pure silver, whose introduction was attributed by Greek tradition to the Lydian king Croesus (561-546 B.C.). Greek tradition also says that when king Pheidon of Argos introduced silver coins, he consecrated a number of iron spits, the form of primitive money which they replaced, in the temple of Hera at Argos. It was indeed the spit currency that provided two of the basic terms of later Greek money, drachma and obol, for "drachma" meant a handful (δραχμή from the verb "to grasp") of spits (ὀβελοί).

From Asia Minor the use of coin spread mainly westward, and it must have reached southern Italy well before 510 B.C. Most coinage struck before the mid-sixth century B.C. remained uniface, and the practice was retained for the electrum coinage of Phocaea, Cyzicus and other cities of Western Asia Minor down to the late fourth century B.C. A group of southern Italian cities produced coins with a design in relief on one face and incised on the other before adopting the biface coins. Greek coins of the classical period before c. 350 B.C. were predominantly of silver from Laureion, near Athens, and other mines in Thrace and Macedonia. Electrum coins were limited to a few localities in Asia Minor, and not until the time of Philip the Macedonian was gold found in sufficient quantities for minting. Persian gold darics were fairly widely used in Greece, but the only Athenian gold issue of the period was prompted by the economic crisis near the end of the Peloponnesian war; in 407 B.C. the gold that adorned the statues in the Parthenon was melted down for that purpose. Bronze was first used in the late fifth century B.C. in Sicily and Magna Graecia where the metal in an unminted state was already the standard currency of the native population.

HELLENISTIC, 323 - first century B.C.

The conquests of Alexander the Great (336-323 B.C.) changed the character of Greek coinage in a number of respects. The treasures of the Achaemenids were now available for minting, and the coinage of the monarchies from Egypt to Bactria and India was marked by the widespread use of personal portraiture. Even Alexander had used only the heads of Athena and Heracles on his coins. But Lysimachus (323-281 B.C.) placed on his coins the head of the deified Alexander, and thereafter portraits of living rulers became common so that we have

the splendid series of the Seleucids of Syria and the Ptolemies of Egypt.

ROMAN, first century B.C. - 332 A.D.

It was in this Hellenistic world that Roman coinage came into existence. Copper, the chief component in bronze, is found in many parts of Italy, and the Romans used bronze by weight as their standard of value. This practice is recalled by many words still in daily use. Such words as "pound," "stipend," and "expense" have as a common source "pendere," meaning to hang or suspend (i.e., in a balance); the equivalents of "pound" in Roman languages (livre, lira, etc.) come from "libra," implying to hang freely. The earliest Roman "coins" were huge pieces of bronze up to a pound in weight, cast instead of struck because of their size. The practical Romans, unlike the Greeks, added marks of value, with upright strokes indicating units in pounds and globules those in ounces. Finally, shortly before 211 B.C., silver denarii in the Greek model began to be struck. Gold, as in the classical Greek world, was only rarely struck, for the most part in emergencies. Imperial Roman coinage was essentially a continuation of that of the Republic, except that it was now exploited on behalf of the emperor, and the propagandistic features of the denarius were now transferred to the coins of other metals. The subsidiary coins were marked with the letters SC, indicating that they had been authorized by the Senate. The portraiture of living persons was fully exploited, the series of imperial portraits that resulted, realistic and sometimes ruthlessly unflattering, being of the highest quality.

BYZANTINE AND MEDIEVAL, 332 - 1453 or 1492 A.D.

After the Roman imperial system collapsed, a new system of coinage was created by Diocletian and Constantine that lasted barely a hundred years. In the early fifth century A.D. that system was transformed, in some measure as a result of the Germanic invasions. The middle value coins ceased to be struck, leaving only three denominations of gold coinage and the lowest denomination of bronze. Thereafter the coinages of the eastern and mainly Greek-speaking provinces, which survived as the Byzantine empire, and of the western and mainly Latin-

speaking ones, which were conquered by various Germanic peoples, developed along quite different lines. In the East, a coinage of copper, the follis, was reintroduced and a silver coin was added later. The coin designs were largely novel with elaborate hieratic imperial representations and much use of Christian symbols, first the cross and later the images of Christ and saints.

Western coinage failed to revive in the same way. The history of medieval coinage falls into three periods, whose limiting dates vary from one country to another. The first period, that of the golden shilling, corresponds roughly to the sixth and seventh centuries. The second one--the one of silver monometallism--dates from the eighth to the end of the twelfth century. The third period, extending from the thirteenth to the middle of the fifteenth century, is the one of the grosso and the florin.

THE SARAZYN COINS

All of the coins in the Sarazyn Collection are biface and range chronologically from the Hellenistic to the medieval periods; it does not include the earliest coins from the Greek period. The Sarazyn coins were minted at such geographically diverse locations as Lyon, Ticinum, Tripoli, and Cyzicus, and the presence of all of these coins in Syria and Lebanon is further evidence of the trade and communication in that area during the period when the Mediterranean was a "Roman lake" and the periods before and after that time.

HELLENISTIC

84. **Coin** from Mysia, minted at Pergamum in 133 B.C.
Bronze; diameter 1.6
Obv: Head of Athena, wearing helmet
Rev:]ΕΡΓΑΜΗ , written vertically downwards
Nike crowning inscription with wreath held in her right hand.
She holds a palm in her left hand.
No. 1/44

85. **Coin** from Lydia, minted at Sardis c. second to first century B.C.
Bronze; diameter 1.9
Obv: Head of young Dionysos, with his hair in ringlets, wearing an ivy wreath
Rev: Horned panther, holding in its raised forepaw a spear, which it breaks between its teeth.
ΣΑΡ[ ]ΜΩΝ
To the left, monogram
No. 2/58

86. **Cilician coin,** minted c. second to first century B.C. at Seleucia ad Calycadnum
Bronze; diameter 1.9
Obv: Head of Apollo, wearing a laurel wreath
Rev: ΣΕΛΕΥΚΕΩΝ ΤΩΝ ΠΡΟΣ ΤΩΙ ΚΑΛΥΚΑΔΝΩΙ

Forepart of a horse. Above it, ΝΚΙ . Below, ΚΑΛ.
No. 3/51

87. **Coin** from Syria, minted at Seleucia on the Tigris by Seleucus I, Nicator (c. 305-281 B.C.)
Bronze; diameter 2.0
Obv: Head of Medusa, winged
Rev: Butting bull
No. 4/52

88. **Greek Imperial coin,** from the Syrian Decapolis, minted at Gadara in the time of Caesar Titus (69-79 A.D.)
Bronze; diameter 1.7
Obv: Head with laurel wreath
Rev: ΓΑΔΑΡΑ
Bust of Tyche, veiled and turreted
No. 11/59

89. **Phoenician coin,** minted at Aradus in the third century B.C.
Bronze; diameter 1.8
Obv: Head of Tyche, wearing turreted crown
Rev: Prow of galley with figurehead of Athena fighting
Above, . Below the galley, Phoenician letters.
No. 12/62

90. **Greek Imperial coin,** probably from Mesopotamia, minted at Carthage in the time of Caracalla, 198-217 A.D.
Bronze; diameter 1.6
Obv:]ΩΝ[
Radiate head
Rev: ΚΑΡ[
Two crescents and rosette
No. 14/54

91. **Hellenistic coin**
Bronze, diameter 2
Obv: Head of Apollo
Rev: Horseman galloping
No. 21/55

92. **Greek Imperial coin**
Bronze; diameter 1.5
Obv: Radiate head
Rev: Two yoked oxen. Possibly there was a ploughman to the left, but it is off the flan.
No. 22/50

On the Hellenistic and Greek Imperial coins listed above, the front sides are still occupied by the head of a god or goddess or of the private Tyche of the city, a goddess that was introduced during the Hellenistic period to personalize the "luck" or "destiny" of a city. Most of the representations on the reverse sides are the emblems of the cities themselves, indicating the issuing authority. The oxen probably symbolize the fertility of the earth and the wealth of the city, while the prow perhaps commemorates a specific event, such as a naval victory. There is not yet much evidence of political propaganda.

"Greek Imperial" is the term numismatists use to identify the local coinage in the eastern provinces of the Roman Empire because it was issued by Greek cities under Roman tutelage. This privilege of minting presumably had to be approved by the Roman government, which was prepared to leave the provision of subsidiary coinage to local authorities while reserving for itself the striking of coins in precious metals.

93. **Greek Imperial coin** from Syria, minted at Antioch-on-the-Orontes in the time of Macrinus, 217-218 A.D.
Bronze; diameter 2.0
Obv: AVTKMOCMAKPINOC

Bust wearing a laurel crown
Rev: SC in wreath; Δ above, Є below
No. 9/245

The mark SC (=Senatus consulto) born by the bronze coinage of the Roman principate testifies to the sharing of powers between the Senate, which controlled the bronze, and the Emperor, who controlled the silver and the gold. Its disappearance in the third century A.D. was a prelude to the despotism of Aurelian and Diocletian, which allowed no place to any independent organ of government, and its revival during the period between 473 and the reconquest of Italy by Justinian testifies to the Indian summer of power which the Senate enjoyed under the rule of Odovacar and the Ostrogothic kings.

94. **Coins** from Syria, minted by Antiochus IV (175-164 B.C.) of the Seleucid dynasty
Bronze; diameter 1.5 (both)
Obv: Radiate head, possibly Antiochus himself
Rev: ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ
Draped standing figure
Nos. 6/111 and 7/176

95. **Coin,** minted by the Ptolemaic kings
Bronze; diameter 1.5
Obv: Head and illegible inscription
Rev: Eagle in three-quarters view on thunderbolt
No. 16/246

96. **Greek Imperial tetradrachm,** minted at Alexandria in the third year of Diocletian's reign (284-305 A.D.), 286-287
Silver; diameter 1.8
Obv: ΑΥΤΟΚΡΔΙΟΚΛΤ
Bust wearing laurel crown and cuirass
Rev: Tyche standing, with her right hand on rudder and cornucopia in her left hand. Beside L Γ
No. 18/250

97. **Greek Imperial tetradrachm,** minted at Alexandria in the second year of Maximian's reign (286-310 A.D.), 286-287
Silver; diameter 2.0
Obv: ΑΚΜΟΥΑΜΑΞΙΜΙΑΝΟCCΕΒ
Bust, draped, cuirassed, and crowned with laurel, seen from back
Rev: Eagle turning back his head, wreath in his beak
On one side of him L and on the other B
No. 19/248

Ancient coins, when they were dated, were usually done so only incidentally. Certain Syrian series were dated either by the Seleucid era (from 312 B.C.) or by a local city calendar or by the regnal year of a particular ruler, and the tradition of dating remained strong in the Near East. It appeared on the coinage of the Sassanians, on the coinage of Alexandria under Roman rule from Augustus to Diocletian, and on Byzantine coinage from 539 to the early eighth century. In each of these cases the dating was by the regnal years of the sovereign. Almost all Islamic coins, which continued the same tradition, were dated, but in the Christian West the practice appeared only very late and was slow to spread.

98. **Denarius,** minted at Rome in 119-122 by Hadrian (117-138 A.D.)
Silver; diameter 1.9
Obv: IMP.CAESAR TRAIAN H- ADRIANVS AVG
Head with laurel crown
Rev: PMT - RPC - OS III
Victory draped, flying right, holding trophy
No. 26/1

99. **Denarius,** minted at Rome in 196-197 by Caracalla Caesar under Septimius Severus (193-211 A.D.)
Silver; diameter 1.7
Obv: MAVR (ANTONI - NVS) CAES.
Draped bust with bare head
Rev: (SECVRITAS - (PE)RPETVA
Minerva, with helmet and aegis on breast. Her right hand rests on an oval shield, and she holds vertical spear reversed in her left hand.
No. 28/3

100. **Antoninianus,** minted in Asia in 266 by Gallienus (253-268 A.D.)
Silver; diameter 2.0
Obv: GALLIENVS AVG.
Radiate, draped bust
Rev: MINERVA AVG.
Minerva leaning on her shield, holding spear in her right hand.
Below, VIIC
No. 29/4

101. **Antoninianus,** minted in Asia (Antioch?) in 267 by Gallienus (253-268 A.D.)
Bronze; diameter 2.1
Obv: GALLIENVS AVG
Radiate, cuirassed bust
Rev: SALV-S (AVG)
Apollo holding laurel branch, tripod to the right
Below, PXV
No. 30/5

102. **Antoninianus,** minted at Tripolis by Aurelian (270-275 A.D.)
Bronze; diameter 2.3
Obv: IMP C AVRELIANVS AVG
Radiate, cuirassed bust
Rev: RESTITVT OR - BIS
Woman standing, presenting wreath to the emperor who is standing left, holding his scepter.
Above, star. Below, KA.
No. 35/67

103. **Antoninianus,** minted in Antioch by Probus (276-282 A.D.)
Bronze; diameter 2.2
Obv: IMP C MAVR PROBVS P F AVG
Radiate, draped, and cuirassed bust
Rev: CLEMENTIA T - EMP
Emperor holding scepter, receiving globe from Jupiter who also holds a scepter.
Between them
Below, XXI
No. 37/71

104. **Coin,** minted in Tripolis by Probus (276-282 A.D.)
Bronze; diameter 2.0
Obv: IMP C M AVR PROBVS AVG
Draped radiate bust
Rev: CLEME -NTIA T-EMP
Emperor holding scepter surmounted by eagle receives globe from Jupiter who also holds scepter.
Between them, ◡
Below them, KA
No. 40/9

105. **Antoninianus,** minted at Cyzicus by Diocletian (284-305 A.D)
Bronze; diameter 2.3
Obv: IMP CC VAL DIOCLETIANVS AVG
Draped radiate bust
Rev: (C)ONCORDIA MILITVM
Emperor holding parazonium receives Victory from Jupiter.
Between them, A
Below them, XXI
No. 43/11

106. **Antoninianus,** minted at Antioch in 285 by Diocletian (284-305 A.D)
Bronze; diameter 2.4
Obv: IMPCCVAL DIOCLETIANVS PF AVG
Radiate draped bust
Rev: IOV ET HERCV CONSER AVGG
Jupiter, holding globe and scepter, facing Hercules who is holding Victory, club, and lionskin.
Between them, Δ
Below them, XXI
No. 44/10

107. **Antoninianus,** minted at Cyzicus in 293 by Maximian (286-305 A.D.)
Bronze; diameter 2.1
Obv: IMP-CMAMAXIMIANVSAVG
Bust, radiate and draped
Rev: CONCORDIAMI - LITUM
Emperor holding parazonium, receives Victory on globe from Jupiter who is holding a scepter.
Between them, Δ
Below them, XXI
No. 45/68

108. **Coin,** minted at Antioch in 302-303 by Constantius I Caesar (293-305 A.D.), the father of Constantine
Bronze; diameter 2.7
Obv: FL VAL CONSTANTIVS NOB CAES
Bust with laurel crown
Rev: GENIO POPV - LI ROMANI
Genius standing left, naked but for chlamys over left shoulder and modius on his head, holding in his right hand a patera, from which liquor flows, and in his left a cornucopia.
Left, B
Below, ANT*
No 47/12

109. **Coin,** minted at Nicomedia in 321-324 by Licinius I (308-324 A.D.)
Bronze; diameter 1.8
Obv: IMP C VAL LICIN LICINIVS PF AVG
Radiate, draped, and cuirassed bust
Rev: IOVI CONS - ERVATORI
Jupiter leans on scepter with eagle; in his right hand he holds a globe with a Victory on it. The eagle holds a wreath. To the right, a captive on the ground.
Right, X IIN
Below, SMNΔ
No. 49/17

110. **Coin,** minted at Rome in 314-315 by Licinius I (308-324 A.D.)
Bronze; diameter 2.1
Obv: IMP LICINIVS PF AVG
Cuirassed bust with laurel crown
Rev: SOLI INV - I - CTO COMITI
Sol, with his right hand raised, holding a globe in his left.
Left, R
Right, X F
Below, RP
No. 52/18

111. **Coin,** minted around 317-320 at Antioch by Licinius II Caesar (317-324 A.D.)
Bronze; diameter 2.0
Obv: DN VAL LICIN LICINIVS NOB C
Bust, draped, wearing laurel crown, holding mappa in his right hand and scepter in his left
Rev: IOVI CONS - ERVATORI CAESS
Jupiter leaning on scepter, holding Victory on globe; at his feet to the left, a captive.
Beside him, Γ
Below him, SMANT
No. 55/16

112. **Coin,** minted around 317-320 at Nicomedia by Licinius II Caesar (317-324 A.D.)
Bronze; diameter 1.8
Obv: D N VAL LICIN LICINIVS NOB C
Draped and cuirassed bust, wearing laurel crown
Rev: PROVIDEN-TIAE CAESS
Jupiter, leaning on scepter, holding Victory on globe.
A palm in the left. In the right, B
Below, SMN
No. 56/89

113. **Coin,** minted at Cyzicus around 332-335 under the reign of Constantine I (307-337 A.D.)
Bronze; diameter 1.7
Obv: URBS-ROMA
Helmeted and plumed bust of Roma, draped with imperial cloak
Rev: Wolf suckling Romulus and Remus. Above, two stars. Below, SMKA.
No. 69/15

114. **Coin,** minted at Alexandria in 326-330 by Constantine I (307-337 A.D.)
Bronze; diameter 2.0
Obv: CONSTAN - TINVS AVG
Head wearing laurel crown
Rev: PROVIDENTIAE AVGG
Camp gate with two towers, no doors; star above. Below, SMAL(A).
No. 62/114

The reverses of Imperial Roman coins are extremely varied in type, often with inscriptions and allegorical persons or concepts announcing the inspiration or objects of imperial policy (in addition to the figures on the reverse sides of the exhibited coins, Pietas, Concordia, and Pax are also often depicted) or depicting its results: the harbour of Ostia, the conclusion of peace with Parthia in 63 A.D., the Colosseum, Trajan's forum and his bridge over the Danube, the vicissitudes of the imperial post, temporary remissions of taxes, the travels of Hadrian, or the victories of Titus or Trajan.

After the Roman imperial system collapsed through inflation of its silver coinage, in the third century A.D. Caracalla (211-217) created a double denarius, apparently called the antoninianus, and its subsequent debasement in the second half of the century drove first the denarius and later all denominations of brass and copper out of circulation. A new system was created by Diocletian and Constantine, different in appearance, denominations, and minting from the old. The whole of the new coinage was imperial, the "senatorial" and local elements being eliminated. Portraiture and variety of design went out of fashion; the imperial effigies became purely conventional and eventually were shown facing instead of in profile, making a true likeness almost impossible to achieve.

This is quite visible in the sequence of coins in the exhibition, starting with the fine portraits of Caracalla (no. 99), Aurelian (no. 102), and Probus (nos. 103, 104), and coming to the more linear ones of Diocletian (nos. 105, 106) and Constantine (nos. 107-114). Also striking is the age difference depicted in the two portraits of Licinius I, the

later one minted ten or fourteen years after the earlier (nos. 109, 110).

The incorporation of titles and epithets on the coin normally makes much abbreviation necessary. The inscriptions on Roman imperial coins, therefore, often have to be interpreted with the aid of information provided by the study of classical epigraphy.

BYZANTINE

115. **Coin,** minted in 321 at Rome by Constantine I (307-337 A.D.)
Bronze; diameter 1.7
Obv: CONSTAN - TINVS AVG
Head with laurel wreath
Rev: DN C [ON] STANTINI MAX [ ]
Wreath enclosing VOTXX
Below, RP
No. 57/104

116. **Coin** of Constantine I (307-337 A.D.) minted at Antioch 330-335
Bronze; diameter 1.8
Obv: CONSTANTI - NVSMAXAVG
Bust, draped and wearing a diadem
Rev: GLOR - IAEXERC - ITVS
Two soldiers, facing each other, holding spears and leaning on their shields; between them, two standards.
Below, SMANΓ
No. 59/117

117. **Coin,** minted at Cyzicus in 313-315 by Constantine I (307-337 A.D.)
Bronze; diameter 2.2
Obv: IMP C FL VAL CONSTANTINVS PF AVG
Head with laurel wreath
Rev: IOVI CONS - ERVATORI
Jupiter holding scepter and globe with a Victory on it. To the left, on the ground, an eagle with a wreath. To the right, Δ.
Below, SMK
No. 61/13

118. **Coin,** minted at Lyon in 314-315, by Constantine I (307-337 A.D.)
Bronze; diameter 2.1
Obv: IMP CONSTANTINVS PF AVG
Bust, draped and cuirassed, with laurel crown
Rev: SOLI INVIC - TO COMITI
Sol, raising his right hand, holding globe in his left hand.
On each side, T and F
Below, PLG
No. 63/14

119. **Coin** of Constantine I (307-337 A.D.), minted at Ticinum in 314-315
Bronze; diameter 2.0
Obv: IMP CONSTANTINVS PF AVG
Cuirassed bust with laurel wreath
Rev: SOLI INVI - C - TO COMITI
Radiate Sol, raising his right hand, holding a globe in his left hand. To the left, a star. Below, PT*.
No. 64/237

The primary source for the study of coins consists of the coins themselves. We have no written sources for the organization of the mint of early Byzantine times, but from the coins we learn that the mint of Constantinople was organized into ten officinae for gold and five for bronze in the reign of Anastasius and that that of Antioch was closed for two years after the destruction of the city by Chosroes in 540. The five coins above have been minted at different places and in different times during the reign of Constantine I.

120. **Coin,** minted at Alexandria in 325-326 by Helena, the mother of Constantine I, Augusta from 324-329 A.D.
Bronze; diameter 2.0
Obv: FL HELENA - AVGVSTA
Bust with diadem, mantle, and necklace
Rev: SECVRITAS - REIPVBLICE
The empress, holding a branch and raising her robe
Below, SMALA
No. 71/24

121. **Coin,** minted at Heraclea in 317 by Crispus, the son of Constantine I, Caesar from 317-326 A.D. According to the legend, Crispus was murdered by his father because his stepmother Fausta falsely accused him of making advances toward her.
Bronze; diameter 2.0
Obv: DN FL IVL CRISPVS NOB CAES
Draped bust, holding globe and scepter in left hand and mappa in right hand
Rev: PROVIDEN - TIAE CAESS
Camp gate with three turrets
Below, MHTΓ
No. 72/19

122. **Coin,** minted at Cyzicus in 337-339 by Constantine II (337-340 A.D.)
Bronze; diameter 1.6
Obv: DN CONSTAN - TINVS PF AVG
Head with laurel wreath
Rev: (GLOR - IA) EXERC - ITVS
Two soldiers with one standard between them
Below, SMKA
No. 77/72

123. **Coin** of Constans (337-350 A.D.), minted at Cyzicus in 337-339
Bronze; diameter 1.5
Obv: (D)N CONSTA - NS PF AVG
Head with pearl diadem
Rev: GLOR - IA EXE(RC - ITVS)
Two soldiers, holding spears and leaning on their shields; between them, one standard.
Below, SMK(A)
No. 106/242

124. **Coin** of Hannibalianus (336-337 A.D.), minted at Constantinople in 336-337
Bronze; diameter 1.6
Obv: FL HANNIBALLIANO REGI
Cuirassed bust
Rev: SE -CVRITAS PVBLICA
A river god reclining on the ground resting on a staff; near him is an urn; in the background, a tree.
Below, CONSS
No. 115/20

125. **Coin,** minted in 351-354 by Constantius Gallus (351-354 A.D.), Caesar
Bronze; diameter 1.5
Obv: DNFLCL CONSTANTIVS NOB CAES
Draped bust
Rev: FEL TEMP RE - PARATIO
Virtus spearing fallen horseman
No. 117/87

126. **Coin,** minted at Cyzicus in 355-361 by Julian II, Caesar
Bronze; diameter 1.7
Obv: DNFLCL IVLI - ANVS NOB CS
Draped bust
Rev: FEL TEMP - REPARATIO
Virtus spearing fallen horseman
To the left, *
Below, SMK(?)
No. 119/158

127. **Coin,** minted at Nicomedia in 364-365 by Valens (364-378 A.D.)
Bronze; diameter 1.7
Obv: (DN) VALEN - S PF AVG
Draped bust with pearl diadem
Rev: (SECVRITAS) (REI) PVBLICAE
Victory holding wreath and palm
Below (S)MNA
No. 131/198

128. **Coin** of Gratian (367-383 A.D.), minted in 378-383
Bronze; diameter 1.5
Obv: DN GRATIA - NVS PF AVG
Diademed and draped bust
Rev: VOT - XV - MVLT - XX inside wreath
No. 135/150

129. **Coin,** minted at Antioch in 383-392 by Valentinian II (375-392 A.D.)
Bronze; diameter 1.4
Obv: (Dn Valentin) IANVSPF AVG
Draped bust with pearl diadem
Rev: SALVS REI - PVBLICAE
Victory, with a trophy on her shoulder, dragging captive
To the left, ℙ
Below, ANT
No. 141/152

130. **Coin,** minted at Constantinople in 393-395 by Theodosius I (379-395 A.D.)
Bronze; diameter 1.5
Obv: (DNT)H(EO)DO - SIVS PF AVG
Diademed and draped bust
Rev: SALVS REIPVBLICAE
Victory, with a trophy on her shoulder, dragging captive
Below, CONS()
No. 146/76

131. **Coin** of Arcadius (383-408 A.D.)
Bronze; diameter 1.2
Obv: DN ARCADIVS PF AVG
Rev: (SALV)SREI - PVBLICAE
Victory, with a trophy on her shoulder, dragging captive.
To the left, ℙ
The mint mark is off the flan.
No. 155/172

132. **Coin,** minted at Constantinople in 395-408 by Honorius (393-423 A.D.)
Bronze; diameter 1.7
Obv: DN HONOR...
Draped and cuirassed bust with pearl diadem
Rev: VIRTUS (EXERCITI)
The emperor in military garb about to be crowned by Victory
No. 163/140

Theodosius I, in order to deal with the diverse problems of the eastern and western parts of the empire, separated it and left his two sons to rule it. During the reigns of Arcadius and Honorius the fractional coinage of silver and bronze underwent a complete collapse. The variety of denominations which existed in the fourth century virtually disappeared, and only a small bronze coin of the smallest denomination survived to satisfy, however inadequately, the needs of the community. In the last quarter of the fifth century, when a certain degree of tranquility had been restored after the great German invasions that marked the century, a

reform of the coinage was carried out in Italy, North Africa, and the eastern half of the empire; a good bronze coinage of several denominations was created, and local trade again had the means whereby it could be carried on. In Spain and Gaul matters went from bad to worse, and the trickle of small bronze coins ceased by the middle of the sixth century. This phenomenon reflected the economic conditions of the time; the development of an economy of great estates in these western provinces had rendered the demand for a small fractional coinage almost nonexistent. The coinage of gold continued, but it circulated only among the richer classes to serve the needs of taxation and to pay for the import of luxuries from the east.

133. **Coin** of Constantius II (337-361 A.D.), minted at Cyzicus in 351-361
Bronze; diameter 1.7
Obv: DN CONSTAN - TIVS PF AVG
Bust with pearl diadem
Rev: FEL TEMP - REPARATIO
Virtus holding shield, spearing fallen horseman
Below, SMKA
No. 89/22

134. **Coin,** minted at Constantinople in 355-361 by Constantius II (337-361 A.D.)
Bronze; diameter 1.7
Obv: Diademed bust
Rev: SPES REI - PVBLICE
Virtus helmeted, holding spear and globe
Below, CONS()
No. 99/92

135. **Coin**
Bronze; diameter 1.7
Obv: IMP CONSTAN [ ]
Diademed and cuirassed bust
Rev: Radiate Sol, with right arm raised
No. 213/135

136. **Coin** of Arcadius (383-408 A.D.) minted at Rome in 402-408
Bronze; diameter 1.5
Obv: DNARCAD - IVSPFAVG
Draped bust with pearl diadem
Behind the head, • (dot)
Rev: VRBSRO - (MA FELIX)
Rome facing, holding trophy on spear and victoriola
To the left, OF
To the right, E
Below, SMROM
No. 159/177

137. **Coin,** minted in 341-346, by Constans (337-350 A.D.)
Bronze; diameter 1.5
Obv: CONSTAN - S PF AVG
Diademed and draped bust
Rev: VICTORI[ ]NN
Two Victories, each holding a wreath; between them, E.
No. 109/165

138. **Coin,** minted at Thessalonica in 364-367 by Valens (364-378 A.D.)
Bronze; diameter 1.7
Obv: DN VALEN - S PF AVG
Draped and diademed bust
Rev: [SEC]VR[ITAS REI] PVBLICAE
Victory holding wreath and palm
Below, TESΔ
No. 130/31

139. **Coin** of Valens (364-378 A.D.), minted in 364-365
Bronze; diameter 1.7
Obv: DN VALEN - S PF AVG
Diademed, draped, and cuirassed bust
Rev: GLORIA RO - MAN(ORVM)
The emperor draped, dragging a captive and holding labarum
No. 129/124

140. **Coin** of Honorius (393-423 A.D.)
Bronze; diameter 1.4
Obv: DNHONORIV...
Draped bust with pearl diadem
Rev: GLORIA (ROMANORVM)
The emperor on horseback, raising his right hand
No. 162/173

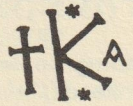
141. **Coin,** minted at Antioch in 395-408
Bronze; diameter 1.1
Obv: ( ) P F AVG
Diademed and draped bust. To the left, *.
Rev: GLOR[IA ROMAN]ORVM
Three emperors, facing; the center figure is smaller and holds spear. The other two hold spear and shield. Below, ANTΓ
No. 184/131

This type of reverse is limited to Arcadius, Honorius, and Theodosius II.

142. **Coin,** late fourth century A.D.
Bronze; diameter 1.2
Obv: ( ) VS PF AVG
Bust
Rev: ( ) NORVM
Emperor standing, holding globe and staff
No. 223/33

143. **Coin** of Arcadius (383-408 A.D.), minted in 395-408
Bronze; diameter 1.0
Obv: DNARC(
Draped and diademed bust
Rev: (Concordia Avg)
Cross
No. 150/232

144. **Half-follis,** minted at Constantinople by Justin I (518-527 A.D.)
Bronze; diameter 2.5
Obv: Diademed and draped head
Rev:

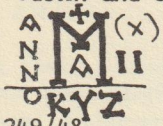


No. 246/47

145. **Pentanum** of Justin I (518-527 A.D.)
Bronze; diameter 1.3
Obv: Draped and diademed bust
Rev:

No. 248/78

146. **Follis,** minted at Cyzicus in 516-517, by Justin II (565-578 A.D.) in the twelfth year of his reign
Bronze; diameter 3.1
Obv: Justin and Sophia, facing, enthroned; between their heads, a cross.
Rev:



No. 249/48

147. **Coin (10 nummi),** minted by Constantine IV (668-685 A.D.)
Bronze; diameter 2.1
Obv: Facing, helmeted bust
Rev:

[ ]
Two facing busts
No. 251/252

The reverses of early Byzantine coins continued the Roman tradition of depicting imperial policy: allegorical persons or deities, like Sol, Virtus, and Victory, were replaced gradually by the emperor, who dragged his captives himself and personally carried the symbols of his God-given reign (no. 139). Rome insisted on depicting on its coins its own personalized deity, even during the fifth century A.D. The gradual adoption

of Christianity by the Roman state, however, found expression in the extension of the use of the cross and Christogram on the coins of Constantine; the reaction of Julian's reign was marked by a series of plainly pagan types. The appearance of the bust of Christ on Byzantine coins for the first time in the reign of Justinian II was the symptom of the tendency which produced the reaction of Iconoclasm.

VENETIAN

148. **Medieval grosso,** minted at Venice by Doge Giovanni Soranzo (1312-1328)
Silver; diameter 2.1
Obv: IO' SVPANTIO - 'S'M•VENETI around. St. Mark, standing on left, presents a banner to the Doge, on right; between their heads, downwards, DVX.
Rev: Christ enthroned; above him, $\overline{IC}$, $\overline{XC}$.
No. 254/64

In 1202 the Venetians, faced with the task of paying large numbers of extra workmen taken on at the Arsenal to construct the fleet for the Fourth Crusade, introduced a coin of good silver, representing two soldi in money of account. It was called a ducat since it was struck for the dogeship or duchy (ducatus) of Venice, but as the use of similar coins spread through Italy in the first half of the thirteenth century, they were more generally termed grossi, i.e., "large" pennies, which became gros in French, groat in English, and groshen in German.

PARTHIAN-ISLAMIC

149. **Drachma** from Parthia, minted in the Hellenistic period by Sinatruces (77-70 B.C.)
Silver; diameter 2.0
Obv: Bust of Sinatruces wearing diadem, helmet, necklace, and cuirass
Rev: Above, in two lines, ΒΑΣΙΛΕΩΣ ΜΕΓΑΛΟΥ
On right, ΑΡΣΑΚΟΥ
In ex., in two lines, ΑΥΤΟΚΡΑΤΟΡΟΣ ΦΙΛΙΠΑΤΟΡΟΣ
On left, in two lines, ΕΠΙΦΑΝΟΥΣ ΦΙΛΕΛΛΗΝΟΣ
Arsakes seated on throne, holding bow
No. 15/57

150. **Islamic coin,** minted by the Umayyad dynasty around 700-750 A.D.
Bronze; diameter 1.5
Obv: Within triple border of dots:

لا اله ا
لا الله
وحده

(La Ilah ila Allah whduh)

Rev: No border; same inscription:

لا اله ا
لا الله
وحده

(La Ilah ila Allah whduh)

No. 255/63

151. **Coin (fels),** minted by the Abbasid dynasty in 783 A.D. at Al-Kufa
Bronze; diameter 1.8
Obv: Three-line inscription:

لا اله الا
الله وحده
لا شريك له

(La Ilah ila Allah wahduh wa-La Sharik Lahu)

Rev: Four-line inscription:

محمد
رسول
الله
بركه

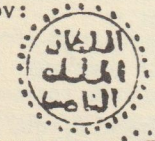
(Muhammad Rasul Allah Barkah)

Margin: مما امر به المهدى محمد امير المومنين بالكوفة
سنة سبع وستين ومئه

(Mina ama bihi al-Mahdi Muhammad Amir al-Mu minin bi-al-Kufah
Sanat Sab a wa-sitin wa-ma'h)

No. 256/59

152. **Coin (fels),** minted by al-Nasir Muhammad of the Mamluk dynasty in the second year of his reign (1310-1341)
Bronze; diameter 1.6
Obv:



(al-Sultan al-Malik Nasir)

Rev:

(Muhammad Nasir al-Dunya wa-al-Din)

No. 257/129

153. **Coin (fels),** minted by al-Nasir Muhammad of the Mamluk dynasty in the third year of his reign (1310-1314) at Damascus
Bronze; diameter 1.9
Obv:

الملك الناصر (al-Malik al-Nasir)

Rev:

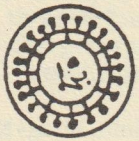
ضرب بد مشق (Durib bi-Dimishq)

No. 258/256

154. **Coin (fels),** minted at Hamah by al-Ashral Shaban (1363-1377)
Bronze; diameter 2.0
Obv:

الملك
الاشرف (al-Malik al-Ashraf)

Rev:



بحماة (Bi-Humah)

No. 260/65

Until quite recent times the most widespread and uniform system of coinage has been that of the Muslim world, not that of Europe. The area over which it at one time or another extended is enormous, stretching from Spain and Morocco to the Malay Archipelago and from Kazan to Zanzibar. Its uniformity results from the fact that almost the whole of it is epigraphic and employs the Arabic script, contrasting both with the pictorial coin types that have dominated the Western tradition and with the Greek or Latin lettering that has accompanied them.

But despite their external differences the two coinages go back to the same source and have influenced each other. The traditional Muslim denominations are the dinar, the dirhem, and the fels, of gold, silver, and copper respectively. The dinar is a derivative of the gold solidus of the late Roman Empire--its name came through Syriac from denarius aureus, i.e., "gold coin"--the dirhem was the drachma of antiquity and the fels was the follis of early Byzantine times. Even later the ghurush, the basic silver coin of the Ottoman Empire, took its name from the groshen of its Austrian neighbor.

Muslim coinage derived ultimately from that of the Parthian Empire, which was founded in the third century B.C. and at its greatest extent included the whole area between the Euphrates River and Afghanistan.

Parthian coins, which were normally of silver, were basically Hellenistic, the coins having on one side the head of a ruler and on the other either the seated figure of the founder of the dynasty or a Greek deity surrounded by a long inscription arranged as a square.

The Arabs during the first half-century of their career of conquest made few changes in the coinage of the occupied provinces. In Syria and Egypt they used the solidi they found in circulation or managed to import from the Empire, but they issued an extensive local coinage in copper, which in Syria and Palestine was modified from Byzantine types mainly by the addition of the mint name in Arabic and sometimes by the elimination of Christian symbols. Not until the late 690s was a major monetary reform carried out by the fifth Uayyad caliph 'Abd al-Malik. The earliest of the new types showed the figure of the standing caliph, and this representation of a living person caused an outcry among the orthodox, for although representational art is not forbidden in the Koran, a strong tradition hostile to it had grown up. These transitional coins were, therefore, almost at once replaced by new designs of which the essential elements are an inscription around the edge and several lines in the center on either side. These inscriptions were at first limited to the Muslim profession of faith--"There is no God but God, who has no associate," "Muhammad is the messenger of God," and "God is one, God is eternal; he begetteth not nor is begotten"--together with the date and, on the dirhems, the name of the mint. On later coins the name, patronymic, and title of the ruler and sometimes further religious formulas (more especially under some Shi'ah rulers who made a heretical addition, "Ali is the friend of God") were added to the profession of faith.

Variations have, of course, occurred: inscriptions arranged in several concentric circles instead of across the field; ornaments and frames around the inscriptions (nos. 153, 154); great variations in the script. In general, though, this pattern has dominated the whole of Muslim coinage down to almost the present day.

JUDEAN

155. **Coin** from Judea, minted by Herod Agrippa I (37-44 A.D.) in the sixth year of his reign (42-43)
Bronze; diameter 1.8
Obv: An umbrella with tassels and the inscription ϢC ΑΓΡΙΠΑ
Rev: Three ears of wheat coming out of two leaves
Beside them, Ϛ
No. 13/53

Herod Agrippa, one of Herod the Great's grandsons who had been brought up in Rome, received from Caligula the tetrarchies of Antipas and Philip (the sons of Herod), which had become vacant by the death or exile of their rulers (37-40). After the death of Caligula and the elevation of Claudius to the throne, Agrippa, who had contributed to this result, added Judea itself to his domain. He then united under his scepter all the

possessions of his grandfather, Herod the Great, and was authorized to assume the title of king. The coin exhibited is his Jewish coin, which was intended for circulation in a Jewish country. Besides this coin, Agrippa struck some much less orthodox pieces on which appeared certain pagan types (Victory, Fortune, etc.), the portrait of the Roman emperor, and sometimes even that of Agrippa himself and his son on horseback. On some of the coins he took the title ΒΑΣΙΛΕΥΣ ΜΕΓΑΣ ΑΓΡΙΠΠΑΣ ΦΙΛΟΚΑΙΣΑΡ, ("the great King Agrippa, the friend of Caesar"). These coins were doubtless intended to circulate only in Agrippa's first tetrarchies, where there was a very mixed population. A third type of coin is represented by an issue which appears to be less a coin than a medal commemorating his alliance with the Romans. It displays on one side, "King Agrippa, the friend of Caesar"; on the other, two hands clasped surrounded by a wreath--the emblem of a treaty or alliance--and a long inscription: "Friendship and alliance of King Agrippa with the Senate and the People of Rome."

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ROMAN GLASS IN THE SARAZYN COLLECTION by Ray Phillips

HISTORY OF GLASS MANUFACTURE

Although glass is one of our most common domestic materials today, the discovery of techniques to shape it and of uses for the finished product was a gradual process that spanned a period of more than a thousand years in the ancient world. Glass-like glazes were made in the fifth millenium B.C. in northern Mesopotamia, but the earliest glass artifacts were irregular blue (cobalt) beads made in Egypt during the VIth Dynasty (2625-2475 B.C.). Later, shallow bowls or dishes were manufactured in Mesopotamia by casting chips of glass filament in molds. These vessels were exported from there to Asia Minor, Syria, Palestine, Cyprus, Egypt, and the Mycenaean colonies in Greece.

Egyptian glassmaking declined from around 1200 B.C. until Alexander the Great's conquest of the region and the foundation of Alexandria in 332 B.C. The Alexandrian glassmakers were particularly skillful at fusing pieces of raw glass into their designs to create chromatic variety, but their molding process remained labor intensive, and the glassware was relatively thick-walled. Athenaeus, a Roman author of the end of the second century A.D., wrote "The men of Alexandria, they say, fashion the glass into many different kinds of cups, imitating the form of all earthen vessels imported from every quarter." It has also been suggested that Alexandria immediately became a focus for Jews in Egypt, and one authority suggests that all the Phoenician glass factories were Jewish and that Jews were, in turn, responsible for founding the Venetian glass industry in Italy in the ninth century A.D.

By the end of the first century B.C., a major technological development dramatically altered the availability and utility of glass in the ancient world. It used to be thought that the invention of glass blowing occurred in the decade preceding the Christian era, but recent excavations in the old city of Jerusalem indicate that blowing originated in the eastern Mediterranean, possibly along the Syro-Phoenician coast, several decades earlier.

The breakthrough was the blow iron, a hollow metal tube through which a glassmaker could inflate a bubble of heated glass, allowing him to create fully enclosed shapes as well as to work considerably faster than the cast method did. Glass blowing was discovered somewhere in the vicinity of Palestine (Pliny the Elder, a Roman encyclopedist of the first century A.D., mentions a river at the foot

possessions of his grandfather, Herod the Great, and was authorized to assume the title of king. The coin exhibited is his Jewish coin, which was intended for circulation in a Jewish country. Besides this coin, Agrippa struck some much less orthodox pieces on which appeared certain pagan types (Victory, Fortune, etc.), the portrait of the Roman emperor, and sometimes even that of Agrippa himself and his son on horseback. On some of the coins he took the title ΒΑΣΙΛΕΥΣ ΜΕΓΑΣ ΑΓΡΙΠΠΑΣ ΦΙΛΟΚΑΙΣΑΡ, ("the great King Agrippa, the friend of Caesar"). These coins were doubtless intended to circulate only in Agrippa's first tetrarchies, where there was a very mixed population. A third type of coin is represented by an issue which appears to be less a coin than a medal commemorating his alliance with the Romans. It displays on one side, "King Agrippa, the friend of Caesar"; on the other, two hands clasped surrounded by a wreath--the emblem of a treaty or alliance--and a long inscription: "Friendship and alliance of King Agrippa with the Senate and the People of Rome."

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of Mount Carmel as a location of suitable sand which had been used for many centuries), but contemporary sources offer no comment on the evolving technique. This may be because the tools for blowing were few and simple, consisting of the iron, calipers to shape the bubble of glass, shears to snip off the blown vessel, and the pontil to remove the blown glass from the iron. During the process of inflation, which could take several minutes and involve repeated heating of the glass to keep it fluid, the shape of the vessel was maintained by constant rotation of the blow iron. A variety of new shapes were also created by blowing the bubble into a mold.

Expanding Roman domination over the Mediterranean region during the first century B.C. permitted rapid dissemination of the new technique. Evidence indicates blown vessels appeared in Italy during the last quarter of the first century B.C., and under the emperor Augustus (27 B.C-14 A.D) glass became cheap and utilitarian. In fact, by 200 A.D. the city of Rome banished glassmakers because of the pollution from their furnaces.

EVOLUTION OF FORM IN GLASS BLOWING

The natural point of departure for blown shapes is the sphere. Ancient glass reveals a continuous evolution toward broadening the base and an abrupt elimination of handles on glassware after the discovery of blowing. This may have resulted in the curious elongated vessels known as "tear bottles" (no. 159). The apocryphal explanation of their use refers to the tears shed by a mother over the grave of her child. A more likely function for these delicate vials, however, was as cosmetic containers, which may indeed have been interred with the dead.

The forms of these two vessels in the Sarazyn Collection (nos. 161 and 165) indicate simple spherical blowing. The "sprinkler" (no. 165), so called because it was supposed to have been used for toilet purposes, was flattened slightly at the base, and the neck was pinched. The ovoid flask (no. 161) also has a flattened base and pinched neck,

but the body was stretched while the glass was still hot (notice the elongated air bubbles trapped in the glass) and vertical "finger notches" were pressed in with a calipers. Lastly, a flat lip was added to the cooling body. Pontil marks are clearly visible at the bases of both vessels where they were removed from the blow iron.

USES OF GLASS IN THE ROMAN PERIOD

The most highly valued glass in the Greek and Roman periods was that which resembled clear crystal, and it was still a novelty in the first century A.D. Fine glass was ranked with the precious metals in the Book of Job and appears to have been in limited supply in Rome, although several sources mention the cheapness of glass in general. The industry as a whole was important enough for employment taxes and export levies to be imposed.

The magnifying effect of glasses filled with water was often noted, and a sphere of water was even used like a lens to focus sunlight to cauterize a wound. The main attraction of glass, however, was its transparency, allowing display of perishable foodstuffs, liquids that might settle, and even for pickling. Berries appear to have kept very well in glass. Medicines were stored with a cloth stopper that might be oil-impregnated to prevent leakage.

Glass was often handed down from generation to generation and was mentioned in Roman law. Pompeii boasted some of the largest pane glass windows--panes of somewhat distorted glass up to three feet across. There was also a vigorous market in recycling broken glass either to create "millefiori" (thousand flowers) vessels or, with the addition of sulphur, small rockhard pieces for wall or floor mosaics.

GLASS OBJECTS IN THE SARAZYN COLLECTION

The fourteen pieces of glass on exhibit from the Sarazyn Collection were made in Palestine between the first and fourth centuries A.D. and are representative of the blown glass available throughout the Roman Empire which encircled the Mediterranean during this period. The pieces are uniformly small and were shaped by being rolled on a flat surface, such as marble, or pinched with a calipers. Several of the flasks had a flat lip added after the body was finished, but only one

(no. 156) features applied ornamentation in the form of a coil of glass filament around the neck.

Irregularities in the proportions of some of the vessels indicate rapid manufacture. These pieces were probably commonly available and relatively inexpensive objects. It is not clear whether the designs of the vessels became increasingly elaborate as the skill of artisans and the demands of users evolved or whether certain shapes were simply adapted from ceramic wares of the same period. For awhile, green glass was the most popular, but it would appear that color and clarity were more highly valued than symmetry by the manufacturers of less expensive glass.

The metallic iridescence on the surface of some of the pieces is a result of weathering and chemical interaction with the soils in which the objects were found.

DESCRIPTION AND NOMENCLATURE FOR ANCIENT GLASS

To date, no standard terms exist to describe the shapes and colors of ancient glassware. University students working on the Sarazyn exhibit, therefore, created a nomenclature focusing on the geometric shapes of the objects and offer this as a contribution to scholarship in the field. Considerable variation in the color and thickness of the Sarazyn glass suggests that the objects were probably not from the same source. Unfortunately, the political confusion in the Palestinian region in this century as well as the problematic claims of dealers in antiquities prevent more precise geographic location of the sources of these objects.

The purpose and function of particular glass vessels in the lives of ordinary Roman citizens is equally shrouded in mystery. The emperor Gallienus (253-268 A.D.) is reported to have refused to eat off of glass which became "common" after the invention of the glass blowing technique. This suggests that glass eventually lost its strictly elite status and became a functional material which was widely traded and appreciated for its beauty, ease of manipulation, and simple ingredients.

156. **Jar,** third to mid-fourth century A.D.
Green glass; h. 8.2, diameter 7.2
SAR-CA2

This jar was reportedly found in a cave at Jennata, near Tyre. It has a decorative band of glass filament trailed around the neck and is the only piece in the Sarazyn Collection with applied ornamentation.

157. **Flask,** late third to fourth century A.D.
Yellow-green glass, prolated neck; h. 10.0, diameter 4.1
SAR-CA13

This flask is dated to the late third or fourth century A.D. on the basis of an analysis of grave goods, particularly jewelry, found with a similar flask.

158. **Flask,** second half of first to mid-third century A.D.
Blue-green glass; h. 14.4, diameter 3.4
SAR-CA14

This slender flask has numerous air bubbles which were caught in the walls during blowing.

159. **Flask,** late second to mid-third century A.D.
Green glass; h. 8.6, diameter 2.5
SAR-CA15

A so-called "tear bottle," this tiny vessel has bubbles throughout the glass. It was reportedly found in Syria.

160. **Flask,** second half of first to mid-third century A.D.
Blue-green glass; h. 11.8, diameter 5.9
SAR-CA18

This vessel has an oblated, spheroidal body. It was reportedly found in a tomb at Hann Aouiye, near Tyre.

161. **Flask with flared neck,** mid-third century A.D.
Yellow-green glass; h. 9.4, diameter 5.0
SAR-CA19

The delicate pear-shaped body of this flask was stretched while the glass was still hot and pinched with a calipers to make vertical indentations. The base was slightly flattened; the vessel has a pinched neck.

162. **Flask,** second to mid-third century A.D.
Yellow-green glass; h. 14.8, diameter 5.9
SAR-CA20

This flask has an elongated body and rounded base which requires a support in order to stand upright.

163. **Triangulated flask,** second to third century A.D.
Colorless glass; h. 11.0, diameter 8.8
SAR-CA23

164. **Miniature flask,** second to fourth century A.D.
Green glass; h. 4.9, diameter 2.9
SAR-CA24

This small vessel, which is covered with medium iridescence, was reportedly found in Roman Tyre.

165. **Sprinkler,** mid-third to fourth century A.D.
Green glass; h. 8.1, diameter 5.6
SAR-CA27

"Sprinklers" were supposedly used for toilet purposes. This example has a slightly flattened base and pinched neck. There is a spherical pattern of bubbles and streaks within the glass indicating the direction the piece was twisted when it was blown.

166. **Flask,** third to fourth century A.D.
Yellow-green glass; h. 16.5, diameter 8.8
SAR-CA29

This vessel has a long neck, constricted at the point where it is attached to a spherical base. It was reportedly found in a cave at Jennata, near Tyre, along with no. 156 and various other objects.

167. **One-handled flask,** second to fourth century A.D.?
Glass covered with extensive weathering; h. 8.4, diameter 5.4
SAR-CA37A

The authenticity of this piece is doubted, as it is significantly shorter in body length than comparable examples and the attachment of the handle is unusual. It reportedly came from the Maarat el Nehman excavations north of Aleppo in northern Syria.

168. **Amulet,** second to fourth century A.D.?
Blue glass; diameter 5.1

This piece appears to have been a bracelet, possibly for a child.

169. **Amulet,** second to fourth century A.D.?
Green glass; diameter 5.8

This bracelet was made by rolling the glass on a flat surface; the join is not visible.

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